

CLAIMS

1. Plate for producing housings and/or lids for button cell batteries,
5 comprising a core layer of steel, a copper or nickel clad top layer at one side of the core layer and a nickel top layer at the other side of the core layer, characterized in that the nickel top layer has been applied by depositing the nickel and in that the core layer of steel has a thickness from 0.10 to 0.5 mm.
- 10 2. Plate according to claim 1, wherein the nickel layer has been applied by plating, preferably electrolytic strip plating.
3. Plate according to claim 1, wherein the nickel layer has been applied by
15 Physical Vapour Deposition (PVD) or by Chemical Vapour Deposition (CVD).
4. Plate according to claim 1, 2 or 3, wherein the plate consists of a core layer of steel, a copper or nickel clad layer on one surface of the core layer and a deposited nickel layer on the other surface of the core layer.
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5. Plate according to claim 1, 2 or 3, wherein the plate consists of a core layer of steel, a deposited nickel layer on both surfaces of the core layer and a copper or nickel clad top layer on one of the nickel layers.
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6. Plate according to claim 5, wherein the deposited nickel layer between the core layer of steel and the copper or nickel clad top layer is thinner than the deposited nickel top layer.
- 30 7. Plate according to any one of the preceding claims, wherein the core layer consists of mild steel, preferably of deep drawing quality.

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8. Plate according to any one of the preceding claims, wherein the plate has a thickness between 0.1 and 0.5 mm, preferably between 0.1 and 0.2 mm.
- 5 9 Housing for a button cell battery fabricated from a plate according to any one of the claims 1 – 8.
- 10 10. Lid for a button cell battery fabricated from a plate according to any one of the claims 1 – 8.
11. Process for manufacturing of a plate according to any one of the claims 1 – 8, the process comprising the steps:
- providing a hot rolled mild steel plate having a thickness between 0.7 and 5 mm, preferably 2.1 mm and
 - 15 - rolling the steel plate to a thickness of preferably 1.0 mm;
 - or:
 - providing a cold rolled mild steel plate having a preferred thickness of 1.0 mm;
 - depositing a nickel layer of 5 to 20 μm , preferably 10 μm thick on one side of the steel plate and optionally a nickel layer having a maximum thickness of 3 μm on the other side;
 - 20 - cladding a copper or nickel layer of 1 to 20 %, preferably 5 to 10 %, of the thickness of the steel plate on the other side of the steel plate;
 - 25 - rolling and annealing of the steel plate to a thickness of 0.1 and 0.5 mm, preferably 0.1 and 0.2 mm.
12. Process according to claim 11, wherein the mild steel plate having a thickness of preferably 1.0 mm is annealed before the nickel layer is deposited.
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13. Process according to claim 11, wherein the mild steel plate with the deposited nickel layer is diffusion annealed after the nickel layer has been deposited.
- 5 14. Process according to claim 11, 12 or 13, wherein the mild steel plate is annealed before the plate is rolled to its final thickness of 0.1 to 0.5 mm, preferably 0.1 to 0.2 mm.
- 10 15. Process according to any one of claims 11 - 14, wherein the nickel is deposited using Physical Vapour Deposition (PVD) or Chemical Vapour Deposition (CVD).
16. Process according to any one of claims 11 - 14, wherein the nickel is deposited by plating, preferably electrolytic strip plating.